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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,449	07/29/2003	David Victor Jones	51307CIP1 (GCSD1443)	5730

27975 7590 05/22/2007
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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT PAPER NUMBER

2617

MAIL DATE DELIVERY MODE

05/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/629,449	Applicant(s) JONES ET AL.	
	Examiner Stephen M. D'Agosta	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-18 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION***Claim Objections***

Claims 1, 11 and 14 objected to because of the following informalities: The examiner is unsure what "three transceivers" actually means – does it mean that there is one transceiver at the Transmit, Relay and Receive nodes, which would total three?. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-18 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 10-391467. Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications teach a polling process by which data is transmitted between two users such that acknowledgements are used and corrupted received packets are retransmitted.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8 and 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore et al US 4,251,865 in view of Lin US 5,881,064 and Harrison US 2002/10172218.

As per **claims 1-5, 8 and 10-18**, Moore teaches a method of conducting wireless packetized digital communications between a first transceiver device and a second transceiver device, geographically remote with respect to said first transceiver device (abstract; figure 1), said method comprising the steps of:

(c) In response to a poll acknowledgement message indicating that a first wireless transceiver (read as portable unit) has data to send, wirelessly transmitting, from a second transceiver device to said first transceiver device, a data request message (column 5, lines 28-37).

(d) In response to receipt of data request message, wirelessly transmitting, from said first transceiver device to said second transceiver device, a data message containing a plurality of data packets (column 5, lines 30-45; figure 7).

(e1) In response to receipt of said data message, storing data contained in data packets of said data message (column 5, lines 38-57).

(f) Wirelessly transmitting from said second transceiver device to said first transceiver device, a data acknowledgement message that includes said information representative of any data packets missing from said data message (column 5, lines 50-55),

but is silent on the method comprising the steps of:

(a) Selectively wirelessly transmitting a polling message to said first transceiver device from said second transceiver device.

b) In response to receipt of said polling message, wirelessly transmitting, from said first transceiver device to said second transceiver device, a poll acknowledgement message representative of whether said transceiver device has data and the quantity of data to be sent.

e2) and storing information representative of any data packets missing from said data message.

The examiner notes that TCP/IP, a well known packet transport protocol, inherently provides the retransmission of any packets which are received in error (it also provides re-sequencing of packets received out of order as well). Hence TCP/IP would provide for "storing information about packets missing from a data message" and request retransmission of said packets. Further to this point is LIN, who teaches:

"...The data communications network 10 of the present invention resolves this problem, by using reliable transport protocol, such as, or similar to the Internet TCP protocol. The TCP protocol is as follows: when TCP sends a data packet it maintains a timer, waiting for the other end to acknowledge reception of the data packet. If an acknowledgment is not received on time, the data packet is retransmitted, and therefore data packets are not lost. When using the Internet, if data is lost, the data will have to be resent. However, by using the present invention, the fill codes maintain real-time communication over the Internet". C15, L52 to C16, L2

Harrison clearly shows and discloses a method further comprising the steps of:

(a) Selectively wirelessly transmitting a polling message to said first transceiver device (read as master device) from said second transceiver device (read as slave device) (paragraphs 29 and 30; figure 1); (the slave device polls the master device to request the establishment of a wireless connection).

(b) In response to receipt of said polling message, wirelessly transmitting, from said first transceiver device to said second transceiver device, a poll acknowledgement message representative of whether said transceiver device has data and the quantity of data to be sent (paragraphs 29 and 30; figure 1). (when the master device receives the polling signal, it generates a response to the polling signal thereby accepting the wireless connection).

It would have been obvious to one skilled in the art at the time of the invention to modify Moore, such that multiple transceivers/repeaters and ACK's are used, to provide the ability to create a large coverage area where data packets are ACK/NACK'ed for optimal transmission.

As per **claims 2-3, 10, 12-13, 15-16** the combo teaches claim 1/2/12/14, **but is silent on** wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to transmit all packets except for specifically identified packets.

Moore does teach a similar concept (C5, L50-57).

The examiner notes that TCP/IP, a well known packet transport protocol, inherently provides the retransmission of any packets which are received in error (it also provides re-sequencing of packets received out of order as well). Hence TCP/IP would provide for "storing information about packets missing from a data message" and request retransmission of said packets. Further to this point is **LIN**, who teaches:

"..The data communications network 10 of the present invention resolves this problem, by using reliable transport protocol, such as, or similar to the Internet TCP protocol. The TCP protocol is as follows: when TCP sends a data packet it maintains a timer, waiting for the other end to acknowledge reception of the data packet. If an acknowledgment is not received on time, the data packet is retransmitted, and therefore data packets are not lost. When using the Internet, if

data is lost, the data will have to be resent. However, by using the present invention, the fill codes maintain real-time communication over the Internet". C15, L52 to C16, L2

It would have been obvious to one skilled in the art at the time of the invention to modify, such that

With further regard to claims 12-13, 15-16, Lin teaches resending data not received, which would inherently include at least one re-send attempt. One skilled would provide for a manner in which to vary the number of times the resend is repeated (eg. if the environment is highly noisy, one would provide for several repeat attempts).

As per **claims 4-5**, the combo teaches claim 1, **but is silent on** wherein step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to retransmit all packets of the last data message.

Moore does teach transmitting and receiving data and a process to ensure the data is received correctly (Col 5, L40-45).

The examiner notes that TCP/IP, a well known packet transport protocol, inherently provides the retransmission of any packets which are received in error (it also provides re-sequencing of packets received out of order as well). Hence TCP/IP would provide for "storing information about packets missing from a data message" and request retransmission of said packets. Further to this point is **LIN**, who teaches:

"..The data communications network 10 of the present invention resolves this problem, by using reliable transport protocol, such as, or similar to the Internet TCP protocol. The TCP protocol is as follows: when TCP sends a data packet it maintains a timer, waiting for the other end to acknowledge reception of the data packet. If an acknowledgment is not received on time, the data packet is retransmitted, and therefore data packets are not lost. When using the Internet, if data is lost, the data will have to be resent. However, by using

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the present invention, the fill codes maintain real-time communication over the Internet". C15, L52 to C16, L2

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that step (g) comprises wirelessly transmitting from said data reception device to said data transmission device, a data acknowledgement message that requests said data transmission device to retransmit all packets of the last data message, to provide means for retransmitting lost packets.

As per **claims 17-18**, the combo teaches claim 14 **but is silent on** wherein a to conduct a attempts before the respective transceiver is operative prescribed number of retransmission declaring a packet effectively lost.

The examiner notes that TCP/IP, a well known packet transport protocol, inherently provides the retransmission of any packets which are received in error (it also provides re-sequencing of packets received out of order as well). Hence TCP/IP would provide for "storing information about packets missing from a data message" and request retransmission of said packets. Further to this point is **LIN**, who teaches:

"..The data communications network 10 of the present invention resolves this problem, by using reliable transport protocol, such as, or similar to the Internet TCP protocol. The TCP protocol is as follows: when TCP sends a data packet it maintains a timer, waiting for the other end to acknowledge reception of the data packet. If an acknowledgment is not received on time, the data packet is retransmitted, and therefore data packets are not lost. When using the Internet, if data is lost, the data will have to be resent. However, by using the present invention, the fill codes maintain real-time communication over the Internet". C15, L52 to C16, L2

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that it attempts before the respective transceiver is operative prescribed number of retransmission declaring a packet effectively lost, to provide

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means for determining if a packet is not received/lost and the ability to take corrective action(s).

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore/Lin/Harrison and further in view of Fujioka US 6,040,786.

As per **claims 6-7**, the combo teaches claim 5, **but is silent on** wherein said data acknowledgement message transmitted in step (g) includes information that indicates whether said further data message is to be immediately transmitted, and wherein step (h) comprises, in the absence of information indicating that said further data message is to be immediately transmitted, waiting until receipt of a further poll message and a further data request message before wirelessly transmitting, from said data transmission device to said data reception device, said further data message containing said data packets missing from said data message transmitted in step (e). (See Moore, Col 2, L11-27 and figures 6-7)

Fujioka shows that the data acknowledgement message includes information that indicates whether said further data message is to be immediately transmitted (abstract).

It would have been obvious to a person skilled in the art at the time the invention was made to incorporate the teaching of Fujioka into the teaching of Moore et al and Harrison in order to poll multiple wireless devices simultaneously.

Allowable Subject Matter

Claim 9 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not specifically teach "wherein step (g) comprises assembling said data acknowledgement message in accordance with the contents of said resend matrix of said group storage section of said memory of said second transceiver device".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

STEVE M. D'AGOSTA
PRIMARY EXAMINER



5-1-07